

West Virginia Engineering Standard

Land Clearing (acre)

Definition

Removing trees, stumps, and other vegetation from wooded areas.

Purpose

To achieve needed land use adjustments and improvements in the interest of soil and water conservation and in keeping with the capabilities of the land.

Conditions where practice applies

This practice applies to wooded areas where the removal of trees, stumps, brush, and other vegetation is needed in carrying out a soil and water conservation plan, and the land to be cleared will be used according to the capabilities.

Planning considerations

The plan shall specify the kinds of timber to be salvaged, lengths of logs, and place of stacking. Method of disposal shall be specified for all material not be salvaged. Clearing and disposal methods shall be according to applicable state laws and with due regard to the safety of persons and property.

The cleared area shall be left in a neat and sightly condition that will facilitate the planned use and treatment of the land.

The plan shall provide for the measures necessary to protect the cleared area from erosion.

When the cleared area will not be planted to crops and no further construction activity is planned for the disturbed area, vegetation shall be established according to the requirements of the West Virginia standard for Critical Area Planting (342) or Pasture and Hayland Planting (512).

Special attention shall be given to maintaining or improving habitat for fish and wildlife where applicable.

Consideration of such things as strip clearing, windrowing debris, and maintaining den and food trees shall be explored.

Water Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, evaporation, and transpiration.

2. The impact of soil settling on the variation in rates of runoff immediately after clearing.

Water Quality

1. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

Federal, State, and Local Laws¹

Design and construction activities shall comply with all federal, state, and local laws, rules, and regulations governing activities in or along streams, pollution abatement, health, and safety. The owner or operator shall be responsible for securing all required permits or approvals and for performing all planned work in accordance with such laws and regulations. SCS employees are not to assume responsibility for procuring these permits, rights, or approvals, or for enforcing laws and regulations. SCS may provide the landowner or operator with technical information needed to obtain the required rights or approvals to construct, operate, and maintain the practice.

Permits for burning may be required from the West Virginia Department of Natural Resources (Forestry Division).

Operation and Maintenance

Land clearing is normally done in preparation for, or concurrently with, other conservation practice installations. Therefore the O&M plan for land clearing should be incorporated within the O&M plan for those practices. Items that should be considered in the plan are:

1. Periodic inspections.

2. Maintenance of the area by mowing or chemical weed control.

3. Repair of eroding areas.

4. Repair of settlement areas where stump holes were filled or buried vegetative waste has deteriorated.

5. Maintenance of vegetation, where required, by fertilization, liming, or reseeded.

Plans and specifications

Plans and specifications for land clearing shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Specifications for land clearing may be developed from NEH-20 specifications, the 700 series specifications, or the specification attached to this standard, as appropriate for the installation method.

2. Individual trees not to be disturbed shall be marked.

3. Where appropriate, depth and extent of grubbing shall be described.

4. Any disposal restrictions shall be described.

5. Depth of cover over disposal areas.

6. Designated areas or methods for stockpiling debris prior to disposal.

7. Vegetative requirements.

8. Pollution control measures.

9. Erosion control measures.

1 Bold italics added by West Virginia.

Items that should be a part of the plans or specifications are:

1. Limits of the clearing operation.

Construction Specification

All trees, brush, shrubs, logs, stumps, and roots shall be removed to the extent and depth described on the drawings. The lateral limits of the clearing are shown on the drawings.

Areas to be cleared may first be timbered for the desirable tree species. Trees may be removed for firewood, fenceposts, or other beneficial uses. All unusable or unwanted debris remaining from the clearing operation shall be disposed of by burning, burying, piling in designated areas, or removed to an approved landfill.

All burning shall conform the requirements of the West Virginia Air Pollution Control Commission.

Debris to be buried shall be compacted as much as possible by the available construction equipment and covered with a minimum of one foot of soil material.

If herbicide treatment is planned, the stumps and brush in the specified area shall be treated at the time of clearing. Treatment shall be according to the recommendations of the chemical manufacturer. Only herbicides designated by the U. S. Environmental Protection Agency for use around water sources shall be used.

Construction shall be done in such a way that chemicals, fuels, lubricants, and waste materials will not pollute air and water. Erosion, air pollution, and water pollution shall be minimized and held within legal limits.

Construction methods and vegetative measures that prevent erosion and control sediment shall be used.

A protective cover of vegetation shall be established on all exposed surfaces where soil and climatic conditions permit. Lime and fertilizer shall be spread at the specified rate and shall be disked into the soil to a depth of 4 inches to prepare a seedbed. Seed and mulch shall be applied at the specified rate. In some cases, temporary vegetation may be used for protection until conditions are suitable for establishment of permanent vegetation.

Where soil or climatic conditions do not permit the establishment of vegetation, and protection is needed, nonvegetative means such as mulches or gravel may be used.

All work shall be done such that the installed practice gives a completed and finished appearance.